



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,355	02/12/2001	Noboru Kimura	108564	8065

25944 7590 08/28/2002

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
----------	--------------

1772

5

DATE MAILED: 08/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/780,355

Applicant(s)

KIMURA ET AL.

Examiner

Marc A Patterson

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12-February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1 – 22, drawn to a pyrolytic boron nitride double container, classified in class 428, subclass 34.1.
 - II. Claims 23 – 24, drawn to a method of manufacturing a pyrolytic boron nitride double container, classified in class 264, subclass 177.2.
2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a materially different method, such as one in which the transmissivity is established by a method other than roughening the surface of the container.
3. Because these inventions are distinct for the reasons described above, and have acquired a separate status in the art because of their recognized different classification and subject matter, and because the searches required for the groups are not the same, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. William Berridge on July 5, 2002, a provisional election was made with traverse to prosecute the invention of I, claims 1 – 22. Affirmation of this election must be made by applicant in replying to this Office action. Claim

Art Unit: 1772

23 – 24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 – 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase ‘double container’ is indefinite, as its meaning is unclear. For purposes of examination, the phrase will be assumed to refer to any container in which the wall has a stepwise change in property from the bottom of the container to the top of the container.

7. Claims 2 – 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrases ‘so that’ and ‘such that’ are indefinite, as the phrases define desired results, rather than specific structural limitations.

8. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase ‘is roughened so that the transmissivity of the inner container is 90%’ is directed to a method limitation, and is therefore given little patentable weight.

Art Unit: 1772

9. Claims 3 – 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase 'while at least one of the thickness, area and doping density of the doped layer is adjusted, so that the transmissivity of the inner container is 90%' is directed to a method limitation, and is therefore given little patentable weight.

10. Claims 5 – 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase 'the doped layer is formed such that the layer is exposed' is directed to a method limitation, and is therefore given little patentable weight.

11. Claims 11 – 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase 'the thickness of the inner layer is increased so that the transmissivity of the inner container is 90%' is directed to a method limitation, and is therefore given little patentable weight.

12. Claims 15 – 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 15 – 18 recite the limitation "opening portion" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 1772

13. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1 – 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al (European Patent No. 0842913).

With regard to Claims 1 and 15 – 18, Kimura et al disclose a pyrolytic boron nitride container for a source of molecular beams used in epitaxy (page 2, lines 5 – 10) wherein the transmissivity of an inner container with respect to light having a wave number of 2600 cm^{-1} to 6500 cm^{-1} is 90% or less (the inner container, its bottom portion, has a transmissivity less than 90% of the transmissivity of the outer container, the portion adjacent to the opening; page 3, lines 6 – 9; page 5, lines 26 – 58; page 9, lines 10 – 15).

With regard to Claim 2, the outer surface of the inner container is roughened (page 7, lines 54 – 57).

With regard to Claims 3 – 4 and 7 – 10, silicon is doped into the inner container to form a doped layer (page 8, lines 5 – 30).

Art Unit: 1772

With regard to Claims 5 – 6, the doped layer is exposed on neither the inner surface nor the outer surface of the container (the doped layer is within the wall of the container; page 8, lines 5 – 30).

With regard to Claims 11 – 12, the thickness of the inner container is greater than that of the outer container.

With regard to Claims 13 – 14, the transmissivity of the inner container changes in the height direction of the container (page 3, lines 6 – 15).

With regard to Claims 19 – 20, there is a gap between the inner container and outer container (a center portion; page 9, lines 10 – 15).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 21 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al (European Patent No. 0842913).

Kimura et al disclose a container comprising a gap between an inner and outer container as discussed above. Kimura et al fail to disclose a gap which is 0.2 to 30 mm wide. However, Kimura et al disclose a gap which is 5 cm (page 9, lines 31 – 35). Therefore, the width of the gap would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of

Art Unit: 1772

ordinary skill in the art to vary the width of the gap, since the width of the gap would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Kimura et al. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

Marc Patterson
Art Unit 1772

Harold Pyon
HAROLD PYON
SUPERVISORY PATENT EXAMINER

1772

8/26/02